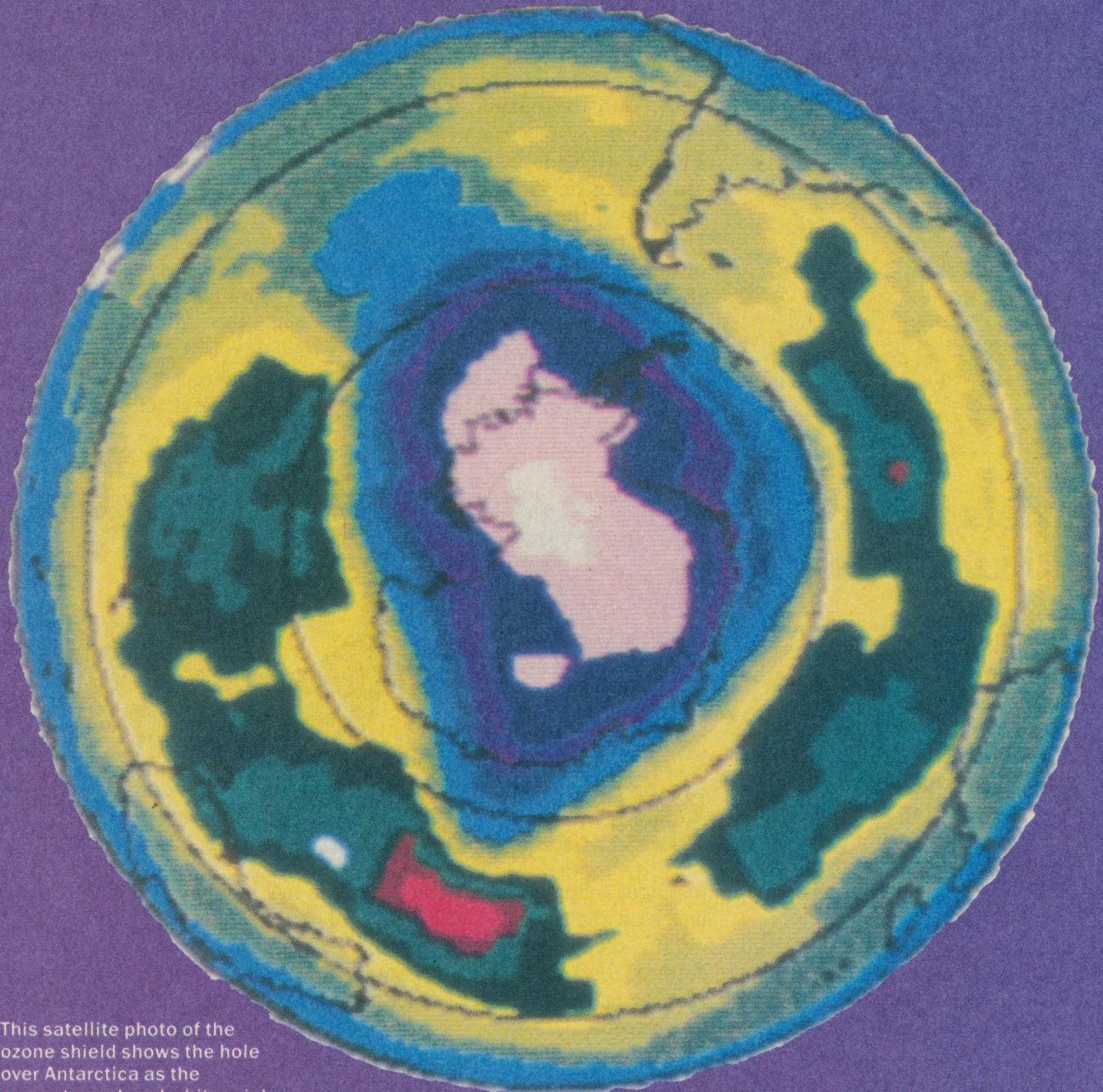
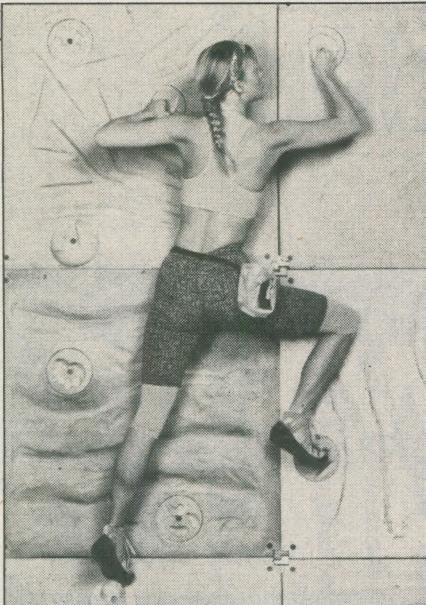


## Hole Grows in OZONE SHIELD



This satellite photo of the ozone shield shows the hole over Antarctica as the computer-colored white, pink, dark blue, and purple areas.

See pages 4-5.



-Mark Hanauer/ONYX

### Climbing a Wall Is Growing Sport

Bad weather is no longer bad news for rock climbers. They can find real challenges at indoor rock gyms now springing up across the U.S.

Both experienced climbers and beginners are welcome at rock gyms. They can work out for a fee when it's rainy or when natural climbing sites are too far away.

Rock gyms have climbing walls made of fiberglass, concrete, brick, or even real rock. Man-made lumps in the walls serve as toe and finger holds. Special shoes and safety harnesses may be rented.

"People have a real sense of achievement when they're climbing something," says the owner of the Vertical Club in Seattle, Wash. This club's rock gym, one of the first in the U.S., is used by 330 members now. They pay \$225 a year to move up in the world.

### New Refuge for Florida Panthers



-Weekly Reader map by Joe Carnicelli

Wildlife experts are making a new move to save the Florida panther from extinction. They have bought 25,000 acres of southern Florida wilderness as refuge for the state's panthers.

Three of the big cats are already living in the area. Eventually, other panthers, captured elsewhere in the U.S., may be introduced there to encourage growth in the panther population.

At present, there are fewer than 50 panthers in southern Florida,

experts say. The panther's worst enemy appears to be the automobile. At least nine panthers have been hit and killed by cars in the last 11 years.

Wildlife experts have suggested special highway underpasses for the panthers so that the animals can avoid cars.

The Florida animals are believed to be the only wild panthers in the eastern U.S. They have been on the endangered species list since the list was first published in 1967.

### Soviets Report UFO Landings

Stories of weird visitors from outer space are coming out of Eastern Europe and particularly the Soviet Union.

One of the first of these UFO reports came from Voronezh, a Soviet city 300 miles from Moscow. Teens told a reporter that they had seen a banana-shaped spacecraft descend nearby. Out walked triple-eyed aliens with a robot in tow, said the teens.

The aliens did no harm, but used a tube-like weapon to make one of the teens vanish. Later, the aliens used the same device to make the



teenager reappear. Then the aliens left, said the teens.

This story prompted a rash of similar UFO tales from the Soviet Union and other countries of Eastern Europe.

A Soviet psychologist explained the UFO craze in this way: "Times are tough here. Flying saucers take peoples' minds off every day life. The stories are great fun, and nobody gets hurt."

# Will a Killer Lake Erupt Again?

Is Lake Nyos getting ready to create disaster again?

This mysterious lake in the western African country of Cameroon may be ready for a repeat performance as a silent killer.

On an August night in 1986, people living near the lake heard a powerful rumbling in the ground. Suddenly a massive cloud of vapor boiled up out of the lake. It rolled 10 miles down a nearby valley, suffocating people, cattle, and wildlife in its path. About 1,700 people and 3,000 cattle were killed by the deadly gas cloud.

Scientists flew to the region to see if they could find out what had caused this natural disaster. They came up with several theories, but to this day no one can definitely answer the question, "what caused the lake to become a killer?"

## Lake Traps Carbon Dioxide

Mile-wide Lake Nyos fills an old volcanic crater. Some scientists think spring water containing large amounts of carbon dioxide

and minerals feeds into the lake from somewhere. The gas becomes trapped in the cool, heavy layers of water at the bottom of the lake.

This gas, stored in the deep, dense water, doesn't mix with the warmer layers of water near the surface. In most lakes carbon dioxide would escape harmlessly at the surface.

Scientists believe that the carbon dioxide burst from the lake just as carbon dioxide fizzles out of a bottle of soda when it is opened.

But at Lake Nyos, millions of cubic yards of the gas shot up out of the water. The blast from the escaping gas pushed out a violent wave of water about 90 yards high, which tore up shoreline vegetation and littered the lake.

## Deadly Conditions Exist Again

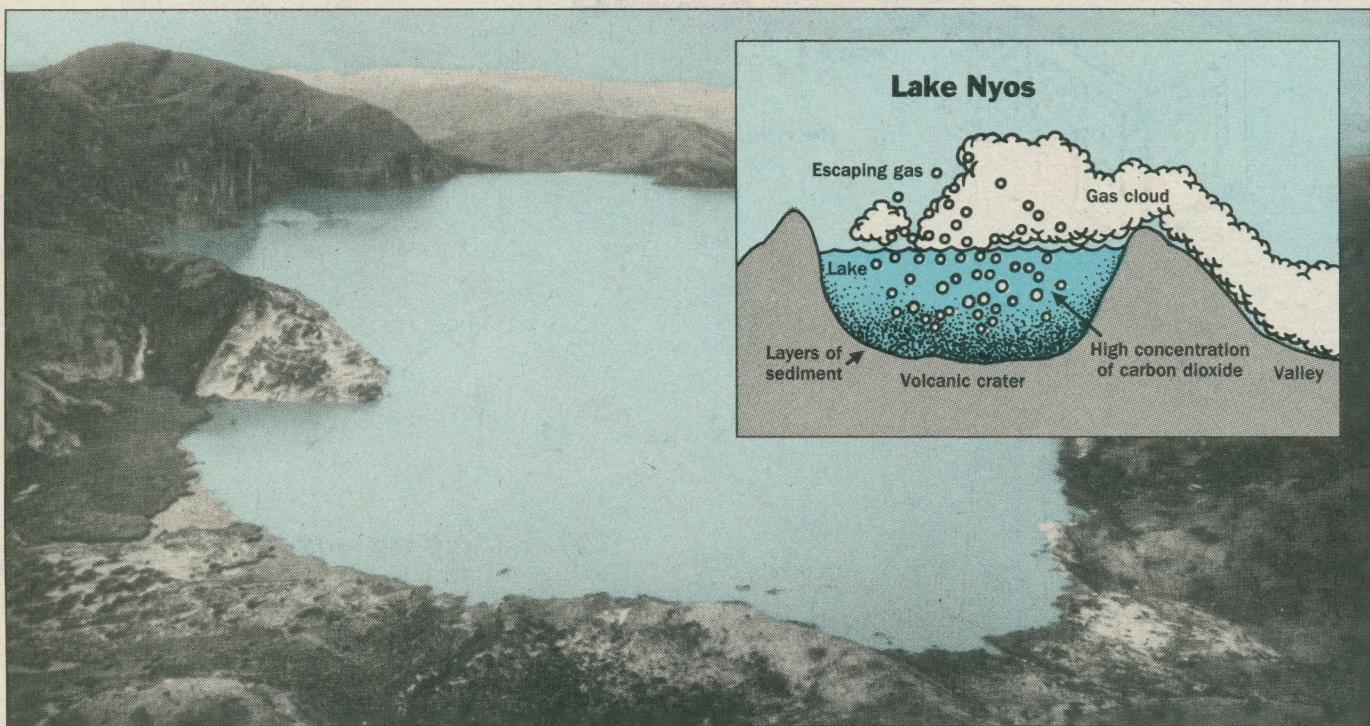
Dr. George Kling of the Marine Biological Laboratory at Woods Hole, Mass., and colleagues recently studied Lake Nyos. They found that the temperature of the

deepest water layers is increasing. They also found that mineral content is increasing in the deepest layers. Although these are conditions that contributed to the disaster in 1986, the researchers can't now determine when the danger level will be reached again. Still, the hazard remains.

The researchers also don't know what might trigger a disaster. In 1986, the disaster might have been triggered by a strong breeze, a rock slide, or a minor eruption of volcanic gases that broke up the balance in the layers of lake water.

Some scientists think the present threat could be removed by pumping out the deep gas-laden layers of water. Possibly this could prevent the normally peaceful lake from turning killer again.

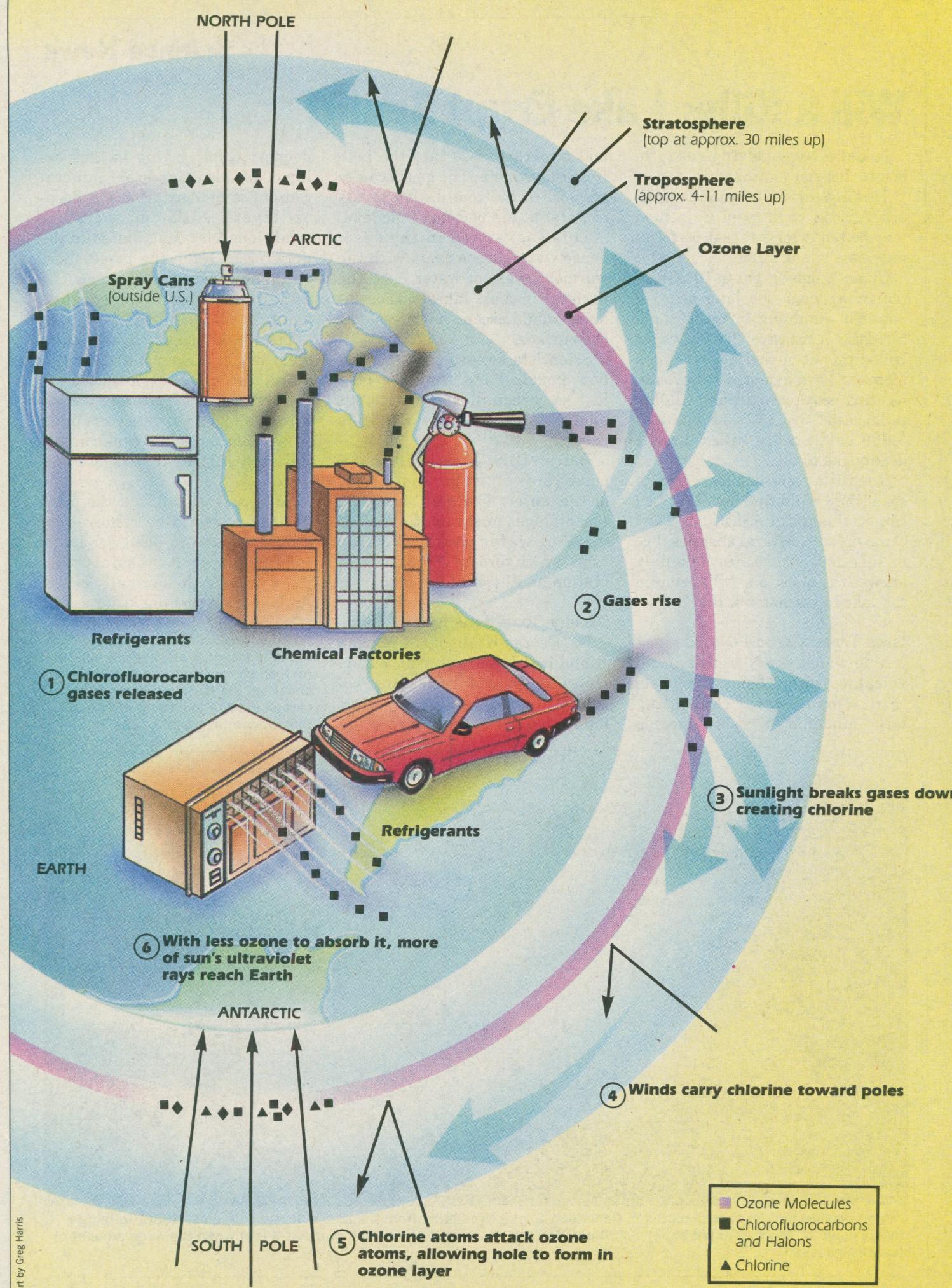
Some scientists think a natural disturbance such as severe winds, a rock slide, or a volcanic gas eruption shook up the lake, causing the carbon dioxide to rise up and form the suffocating cloud of gas.



Carbon dioxide that had accumulated in Cameroon's Lake Nyos burst from the lake's depths in August 1986, forming a deadly cloud of gas that killed about 1,700 people. The water level of the lake dropped 3 feet when the huge amount of gas was released.

—Weekly Reader art by Mike DiGiorgio

—George Kling/Marine Biological Lab



# Hole Grows in OZONE SHIELD

Scientists have found that a nearly invisible shield of gas that protects Earth from some of the sun's harmful rays is breaking down. Holes in this shield may be growing larger and may be spreading over wider and wider areas, warn some scientists.

The gas that protects Earth is called *ozone*. This icy-blue gas is a form of oxygen created when the sun's rays strike oxygen 10 to 30 miles above Earth.

The ozone shield reflects or absorbs much of the sun's ultraviolet radiation. Ultraviolet radiation causes sunburns.

Holes form in the ozone shield during cold winter periods. When the first hole was noticed, in 1985, it was over much of Antarctica. During the past Antarctic winter, however, the hole in the ozone layer extended as far as the tip of South America.

And during 1988, the ozone hole drifted over part of Australia. That was the first time a hole in the shield moved over a populated area, say scientists.

A smaller hole has been found in the ozone shield over the North Pole. And, say experts, the shield has slowly broken down over North America. Some experts say that the ozone shield over the U.S. is now about 2.3 percent thinner than it was 20 years ago.

## Effects of Hole in Ozone

As the ozone shield breaks down, more and more ultraviolet radiation reaches Earth. But the effects of this increased radiation are still being debated.

Some scientists say that the radiation does not cause much trouble. "It's just like having July sunlight, but in January," says one scientist. "Since most people are indoors or wearing heavy clothes in winter, the increased radiation is not a problem."

Other scientists disagree. They say that increased ultraviolet radiation might be harming farm animals and winter crops used by humans as food.

Additionally, increased ultraviolet radiation can cause eye damage, reduce the body's ability to heal itself, and caused an increase in the number of skin

cancer cases, say scientists.

Some doctors who treat skin problems believe that the breakdown in the ozone shield is already having an effect on people. These doctors say that there is an increase in a skin disease called *melanoma*. Melanoma, which can be fatal, used to be found only in older people. But now, about a quarter of melanoma cases are found in people under 39.

## How Shield Breaks Down

The attack on the ozone shield begins on Earth. The most serious threat to the ozone shield is a gas called *chlorofluorocarbons*—CFC's for short. CFC's are used in many common things—in refrigerators and air conditioners, in aerosol spray cans made outside the U.S., in some foam insulation, and in some plastic foam food containers used for fastfoods.

Another gas that harms the ozone shield is called *halon*. This gas is used in some fire extinguishers.

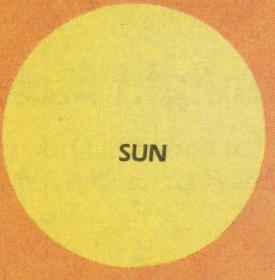
When these gases are released into the air, they rise slowly. Years later, these gases may reach the stratosphere, which begins about 7 miles above Earth's surface. Sunlight striking the gases in the stratosphere causes them to break apart to form other gases that attack the ozone.

## U.S., Europe Seek CFC Ban

The U.S. and many other nations are taking steps to limit damage to the ozone shield.

The U.S. banned the use of CFC's in aerosol cans a decade ago. And President George Bush wants the U.S. to stop using all CFC's by the year 2000. Most Western European countries have also agreed to end the use of CFC's by the year 2000.

The decision to rapidly reduce CFC use may be due in part to a recent report that the amount of CFC's in the air above the North Pole is 50 times higher than expected. This could result in a hole over the North Pole this spring that could drift over northern parts of North America and Europe.



SUN

## Sunlight Makes You Smile?

By Pat Fosarelli, M.D.  
Johns Hopkins Children's Center



—Weekly Reader art

Do you feel sleepy or depressed on cloudy, rainy days? Or happy and peppy on bright, sunny days?

Do you think that the weather is affecting the way you feel?

The weather has a very real effect on people.

Our bodies and minds are affected by light. Sunlight makes us more energetic. It puts us in a happier mood.

Think of spring, when the days get longer. Doesn't that make you feel happy?

Just the opposite happens in winter. You feel like slowing down. Some people go to bed earlier and sleep later in winter months. Others become very sad or depressed because they don't get enough sunlight.

This sadness is real. It comes from certain chemicals that our bodies produce naturally. Our bodies need light to produce these chemicals. When it's dark, we don't produce enough of these "happy" chemicals.

Does this sound strange to you?

It is new and strange to scientists too. They are just beginning to understand how natural cycles, like periods of light and dark, affect us.

All living things are affected by light. That's why flowers close up at night and animals sleep at night and some animals hibernate in winter. Human beings have minds as well as bodies. It seems logical that both are affected by light.

What can you do to stay healthy in the darker, winter months?

**REMEMBER:** Try to see as much sunlight as possible. It will help you stay healthy in mind and body, even if it is cold; just dress warmly. The sunlight will make you smile.



Todd Seitz took up skiing soon after he lost his left leg.

—National Handicapped Sports & Recreation Assn.

## Disabled Skiers Excel

Todd Seitz is only 13, but he's already thinking about the 1992 Winter Olympics. Some people say Todd could be skiing for the U.S. in those games.

If Todd does ski in the Olympics, he'll be doing something he might have thought was impossible just a few years ago. When Todd was eight, he lost his left leg to cancer. Todd is a disabled skier.

Thanks to organizations like National Handicapped Sports (NHS), many disabled people like Todd have learned how to ski. Some of these skiers have gone on to represent the U.S. in disabled skiing events around the world.

### How It Began

Skiing first became popular in the U.S. among disabled people in the mid-1940's. Some returning disabled veterans wanted to pursue a recreational sport. They learned special techniques for skiing from European disabled skiers. Disabled people have been skiing in Europe since the early 1900's.

To ski, a disabled skier uses ski poles that have small skis attached to their bottoms. Disabled skiers sometimes also use a special ski called a monoski, which has a seat attached to it.

People in wheel chairs can ski in sit-skis. To sit-ski, the skier sits in a small cart that looks like a bobsled. The sled sits on a single ski, and the skier controls the craft with two short poles.

Races for disabled skiers and ski instructions for disabled kids are held all over the U.S. This weekend, the NHS is sponsoring an event in Vermont. The 1990 Disabled Ski Championships will also be held in Vermont, on March 11-16.

# FU<sup>S</sup> STUFF

## Back To Future Once Again

Poor Marty McFly.

First he and mad scientist Doc

Browne took a strange trip back in time, and Marty had to make sure his parents fell in love—so he could be born.

Now he and the Doc have to travel 30 years into the future and 30 years into the past! Can they do it?

They can—and do—in *Back to the Future II*, the sequel to the 1985 hit comedy, *Back to the Future*.

Michael J. Fox once again plays Marty. In this sequel, all of Marty's hopping around in time brings him face-to-face with himself as a 47-year-old man—also played by Fox.

Marty also runs into his son, Marty, Jr., and his daughter Marlene. And Fox plays both of those roles too! Fox spent as long as four hours a day being made-up for these different parts.

## Senior Sleuths

Senior Sleuths Megan and José meet Chief Henderson at the law offices of Soomee, Sooyoo, and Guildy.

"I. Will Sooyoo has been kidnapped," says the Chief. "The kidnappers want \$250,000 tonight. Once they get the money, they release Sooyoo—or they get rid of him. He might know too much."

"Are there any suspects?" José asks.

"Yes," the chief replies. "The two other partners, Soomee and Guildy were both seen around the office right before Sooyoo was kidnapped. Whoever



—Ralph Nelson; Copyright © 1989 Universal Studios Inc.

Michael J. Fox plays four roles in *Back to the Future II*.

### A Winning Role

Michael J. Fox was already a TV star on the show "Family Ties" when he made *Back to the Future*. But the success of the film made Fox an even bigger star. *Back to the Future* was the top movie of 1985.

The makers of *Back to the Future* say they hadn't planned to make a sequel. But once they decided to make it, they say they knew the sequel had to begin where part one ended—with Marty and Doc Browne zooming into the future.

This time, while making part two, Fox and the filmmakers did know there'd be a part three. They worked on both films at the same time!

And what happens in part three? Well, look for Marty and Doc Browne to take another trip back in time—to the Wild West of 1885!

the kidnappers are, they forced Sooyoo to type and sign this message:

*I have been kidnapped. Get \$250,000 and put it in the lead pipe outside my house.*

"Sooyoo was so nervous he made a lot of typing mistakes," the Chief says.

"He wasn't the only one who made a mistake," Megan says. "Chief, prepare an arrest warrant."

### Who was the kidnapper?

## Garfield



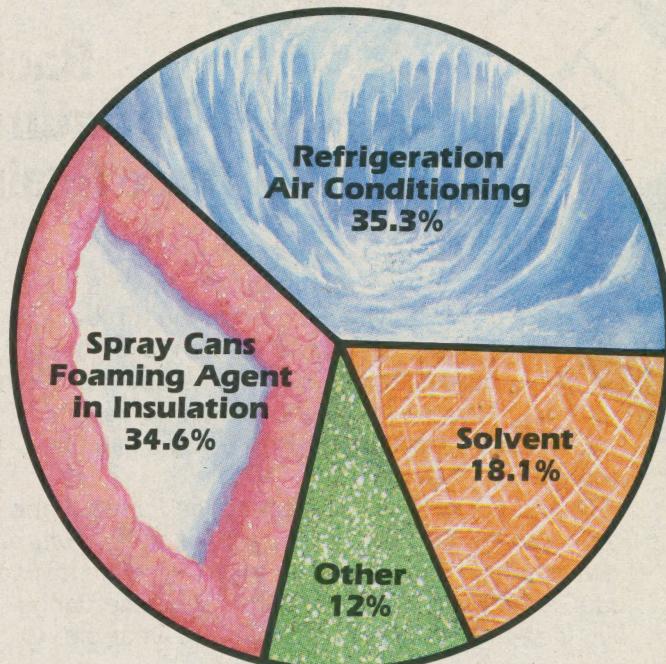
by Jim Davis

## News Graph Reading

Study the diagram on page 4 and the pie graph at right. Then mark T before each true statement and F before each false statement below.

- \_\_\_\_ 1. According to the diagram, CFC's are released by TV sets.
- \_\_\_\_ 2. CFC's rise into the air.
- \_\_\_\_ 3. Nitrogen in the air causes CFC's to break down, releasing chlorine atoms.
- \_\_\_\_ 4. Winds carry the chlorine gas to the equator and away from the poles.
- \_\_\_\_ 5. Chlorine strengthens the ozone shield.
- \_\_\_\_ 6. As the ozone shield grows weaker, more ultraviolet rays can reach earth.
- \_\_\_\_ 7. According to the graph, the largest use of CFC's is for solvents, or cleaning agents.
- \_\_\_\_ 8. The second largest CFC use is for spray cans and foaming agents.
- \_\_\_\_ 9. A total of about 18 percent of CFC's is used for refrigeration and air conditioning.
- \_\_\_\_ 10. More CFC is used to make solvents than is used for air conditioning and refrigeration.

Uses of Chlorofluorocarbons



SOURCE: Environmental Protection Agency

art by Greg Harris

## News Comprehension

Complete the following sentences by underlining the correct word or words.

1. Rock gyms are places where people can (*crush, climb, lift*) rocks.
2. The Florida panther's worst enemy is (*alligators, automobiles, hunters*).
3. Strange tales about (*diamonds, UFO's, cars*) are coming out of the Soviet Union.
4. (*Oxygen, Carbon dioxide, Nitrogen*) burst from a lake in Africa in 1986, killing 1,700 people.
5. The gas killed people around the lake by (*suffocating, burning, poisoning*) them.
6. Ozone is a form of (*nitrogen, oxygen, carbon*).
7. The first hole discovered in the ozone shield was over (*the U.S., the North Pole, Antarctica*).
8. The ozone shield (*blocks, does not affect, focuses*) ultraviolet radiation from the sun.
9. Halon, used in (*roads, sneakers, some fire extinguishers*), is a threat to the ozone shield.
10. Most Western European countries have set the year (*1993, 2000, 2010*) as their target for ending the use of CFC's.

## News Vocabulary

Beside each word in the column at left, write the letter of its definition.

refuge	_____	a. to die from being unable to breathe
endangered	_____	b. to draw or pull along behind
UFO	_____	c. a gas or material in the air, such as smoke
weird	_____	d. a place that provides shelter
triple	_____	e. a large number of occurrences in a short time
rash	_____	f. unidentified flying object; a craft from outer space
tow	_____	g. strange; something out of the ordinary
vapor	_____	h. threatened with dying out
fizz	_____	i. having three units; being three times as great or having three times as many
suffocate	_____	j. to make a hissing or sputtering sound; to bubble up or out of something